

In The Claims

Please cancel, without prejudice, claims 2, 7 and 10.

Please amend the remaining claims as follows:

1. (currently amended) A computer network comprising a plurality of interconnected network devices including:
- (a) a plurality of client computers;
  - (b) an authentication server computer operated by a system administrator; and
  - (c) a disk drive connected to the authentication server computer, the disk drive comprising:
    - an interface for receiving personal authentication data and user access data from the system administrator;
    - a disk for storing data;
    - a disk controller for controlling access to the disk;
    - an authenticator, responsive to the personal authentication data, for enabling the disk controller; and
    - cryptographic circuitry for encrypting the user access data received from the system administrator into encrypted data stored on the disk;
- wherein:
- the user access data comprises a plurality of user identifiers and corresponding access rights to the plurality of network devices;
  - the disk stores encrypted device access data associated with the network devices;
  - the device access data for use in authenticating device access requests transmitted from client computers to the network devices; and
  - the encrypted device access data is stored on the disk during manufacture of the disk drive.

2. (canceled)

1 3. (currently amended) The computer network as recited in ~~claim 2~~claim 1, wherein the user  
2 access data further comprises user authentication data.

1 4. (original). The computer network as recited in claim 3, wherein the user authentication  
2 data comprises a user password.

1 5. (original) The computer network as recited in claim 1, wherein the personal  
2 authentication data comprises a user password.

1 6. (original) The computer network as recited in claim 1, wherein:  
2 (a) the cryptographic circuitry comprises an immutable secret drive key configured  
3 during manufacture of the disk drive; and  
4 (b) the secret drive key for use in encrypting the user access data.

1 7. (canceled)

1 8. (currently amended) The computer network as recited in ~~claim 7~~claim 1, wherein the  
2 encrypted device access data comprises an encrypted secret device key shared with a  
3 corresponding network device.

1 9. (currently amended) The computer network as recited in ~~claim 7~~claim 1, wherein:  
2 (a) the interface receives unencrypted device access data; and  
3 (b) the cryptographic circuitry encrypts the unencrypted device access data into the  
4 encrypted device access data stored on the disk.

1 10. (canceled)

11. (currently amended) The computer network as recited in ~~claim 7~~ claim 1, wherein the encrypted device access data is transmitted from the network devices to the disk drive.

12. (original) A computer network comprising a plurality of interconnected network devices including:

(a) a plurality of client computers;

(b) an authentication server computer; and

(c) a disk drive connected to the authentication server computer, the disk drive comprising:

an interface for receiving from a client computer a user ID and a user access request to access a network device, and for transmitting device access data to the client computer;

a disk for storing encrypted data;

a disk controller, responsive to the user ID and user access request, for controlling access to the disk; and

cryptographic circuitry for decrypting the encrypted data stored on the disk to generate decrypted data,

wherein the disk controller uses the decrypted data to generate the device access data transmitted to the client computer.

13. (original) The computer network as recited in claim 12, wherein:

(a) the encrypted data comprises encrypted user authentication data corresponding to the user ID; and

(b) the cryptographic circuitry decrypts the encrypted user authentication data to generate decrypted user authentication data.

- 1 14. (original) The computer network as recited in claim 13, wherein the decrypted user  
2 authentication data comprises a user password.
- 1 15. (original) The computer network as recited in claim 12, wherein the cryptographic  
2 circuitry encrypts the device access data before transmission to the client computer.
- 1 16. (original) The computer network as recited in claim 13, wherein:  
2 (a) the cryptographic circuitry encrypts the device access data before transmission to the  
3 client computer; and  
4 (b) the cryptographic circuitry encrypts the device access data using a cryptographic user  
5 key extracted from the decrypted user authentication data.
- 1 17. (original) The computer network as recited in claim 16, wherein the cryptographic user  
2 key is generated by the cryptographic circuitry using the decrypted user authentication  
3 data.
- 1 18. (original) The computer network as recited in claim 16, wherein the cryptographic user  
2 key is a public key for use in a public key encryption algorithm.
- 1 19. (original) The computer network as recited in claim 12, wherein:  
2 (a) the cryptographic circuitry encrypts the device access data using a secret device key  
3 shared with the network device; and  
4 (b) the secret device key is used by the network device to authenticate device access  
5 requests received from client computers.

1    20.    (original) The computer network as recited in claim 19, wherein the secret device key  
2           shared with the network device is stored in encrypted form on the disk and decrypted by  
3           the cryptography circuitry.

1    21.    (original) The computer network as recited in claim 12, wherein:  
2           (a) the cryptographic circuitry comprises an immutable secret drive key configured  
3           during manufacture of the disk drive; and  
4           (b) the secret drive key for use in decrypting the encrypted data stored on the disk.

1    22.    (original) A computer network comprising a plurality of interconnected network devices  
2           including:  
3           (a) a plurality of client computers;  
4           (b) an authentication server; and  
5           (c) a disk drive comprising:  
6           an interface for receiving an encrypted device access request and for  
7           inputting/outputting user data from/to a client computer;  
8           a disk for storing data;  
9           a disk controller for controlling access to the disk;  
10          an internal drive key;  
11          a secret device key shared with the authentication server, the secret device key stored  
12          in encrypted form;  
13          cryptographic circuitry, responsive to the internal drive key, for decrypting the  
14          encrypted secret device key to generate a decrypted secret device key; and  
15          an authenticator, responsive to the decrypted secret device key, for authenticating the  
16          device access request.

- 1 23. (original) The computer network as recited in claim 22, wherein the encrypted secret  
2 device key is stored on the disk.
- 1 24. (original) The computer network as recited in claim 22, wherein the encrypted secret  
2 device key is configured during manufacture of the disk drive.
- 1 25. (original) The computer network as recited in claim 22, wherein the disk drive transmits  
2 the encrypted secret device key to the authentication server.
- 1 26. (original) The computer network as recited in claim 22, wherein the internal drive key  
2 comprises tamper-resistant circuitry.